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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF

OGAWA, MASAHIKO ET AL

: EXAMINER: ELHILO, EISA

SERIAL NO: 10/614,811

:

FILED: JULY 9, 2003

: GROUP ART UNIT: 1751

FOR: HAIR DYE COMPOSITIONS

:

DECLARATION UNDER 37 CFR 1.132

COMMISSIONER FOR PATENTS
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SIR:

Now comes Masahiko Ogawa who declares and states that:

- 1) I am one of the inventors of the invention described in the above-identified application.
- 2) In 1990 I received the Master of chemical engineering from Waseda university.
- 3) Since 1990 I have been employed by Kao Corporation as a researcher where I have been engaged as a researcher in the study of hair color products.
- 4) I have read the specification of the above-identified application as well as the content of the Office Action of May 13, 2005 and each of the references cited therein.

5) That in order to show the importance of the carbonate salt ingredient as a component of the first pack component of the hair dye formulation that is employed in the presently claimed method, the following comparative evidence is presented.

Hair was dyed in the manner of the examples of the present application using the first pack and second pack formulations shown in Tables A and B below.

TABLE A

Ingredient (wt %)	Example	Comp Examples			
		1	1	2	A
Aqueous ammonia (28 %) (Ingredient A)	0.5	0.5	0.5	0.5	
Ammonium chloride (Ingredient A)	0.5	0.5	0.5	0.5	
Ferrous sulfate (Ingredient C)	15 ppm	15 ppm	-	15 ppm	
Tetrasodium ethylenediamine-tetraacetate	0.1	-	0.1	0.1	
Monoethanolamine	3.5	3.5	3.5	3.5	
Potassium carbonate (Ingredient B)	2.5	2.5	2.5	-	
Toluene-2,5-diamine	1.0	1.0	1.0	1.0	
Resorcin	0.4	0.4	0.4	0.4	
Metaaminophenol	0.2	0.2	0.2	0.2	
Cetanol	6.0	6.0	6.0	6.0	
Octyldodecanol	1.0	1.0	1.0	1.0	
Polyoxyethylene (40) cetyl ether	3.0	3.0	3.0	3.0	
Polyoxyethylene (2) cetyl ether	3.5	3.5	3.5	3.5	
Liquid paraffin	1.0	1.0	1.0	1.0	
Propylene glycol	6.0	6.0	6.0	6.0	
Sodium sulfite	0.5	0.5	0.5	0.5	
Ascorbic acid	0.5	0.5	0.5	0.5	
Hydrochloric acid	Amount sufficient to adjust pH to 10.5				
Water	Balance				
Content of ingredient A (mol/kg)	0.175	0.175	0.175	0.175	
Content of ingredient B (mol/kg)	0.181	0.181	0.181	0.000	
(A)/(B) (molar ratio)	0.967	0.967	0.967	-	
Irritating odor	2.9	2.9	2.9	2.9	
Irritation to the scalp	2.8	2.8	2.8	2.9	
Dyeability	55	47	48	44	
Color retention	2	6	6	5	
Lightness	27	22	22	20	

TABLE B

Ingredient	Amount added (wt %)
Hydrogen peroxide (35 %)	17.1
Methylparaben	0.1
Phosphoric acid	Amount sufficient to adjust pH to 3.5
Water	Balance

--Methods of Evaluation--

(1) Irritating odor

The second pack was added to and mixed with the first pack in equal amounts (by weight). The odor of the mixture was ranked by 10 expert women panelists in accordance to the following standards:

- | | |
|--|---------|
| No substantial irritating odor was sensed: | score 3 |
| A slight irritating odor was sensed: | score 2 |
| A strong irritating odor was sensed: | score 1 |

(2) Irritation to the scalp

The first pack and second pack were mixed in equal amounts and applied to the scalp. Irritation that developed on each scalp was then ranked by 10 expert women panelists in accordance to the following standards:

- | | |
|--|---------|
| No significant irritation had developed: | score 3 |
| Slight irritation had developed: | score 2 |
| Strong irritation had developed: | score 1 |

(3) Dyeability

A mixture of equal amounts of a first pack (5 g) and a second pack (5 g) was applied to a white tress (7 g), and after the white tress was allowed to stand at 30°C for 15 minutes, the white tress was rinsed and shampooed and then dried. The dyeability of the tress was measured by use of a CR400 type colorimeter (Minolta) to determine the color difference (ΔE) between the dyed tress and the original white tress, and evaluated.

(4) Color retention

The white tress that had been dyed in test (3) was repeatedly washed 20 times with a commercial shampoo, and then the white tress was measured by use of a CR400 type colorimeter (Minolta) to determine the color difference (ΔE) between the dyed white tress after washing and the dyed white tress before washing, and evaluated.

(5) Lightness

Using a black tress (7 g), dyeing of the tress was performed in a manner similar to that of test (3). The lightness of the tress was measured by a CR400 type colorimeter (Minolta) and the degree of lightness (L-value) was determined and evaluated.

6) A comparison of the property results in Table A of Example 1 in which potassium carbonate was used as a component of a first pack formulation with Comp Example A in which no potassium carbonate was present in a first pack formulation shows that a formulation within the scope of the present invention as claimed exhibits superior dyeability, color fastness and lightness properties in comparison to a first pack formulation the same as that of Example 1 except that no potassium carbonate was present. These results confirm that in a formulation which contains iron salts, the effects of the present invention can not be achieved if the first pack does not contain a carbonate salt.

7) The undersigned petitioners declare further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

8) Further, deponent saith not.

26 Oct. 2005

Date

Masahiko Ogawa

Signature